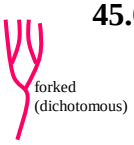
Mychodea pusilla
(Harvey) J Agardh

45.600



Techniques needed and shape

Classification Phylum: Rhodophyta; Order: Gigartinales; Family: Mychodeaceae

***Descriptive name** small, tufted Mychodea

Features

1. plants red-brown, ***gristly***, tufted, 10-30mm tall, ***restricted*** to the wiry stems of the seagrass, *Amphibolis*
2. branches ***cylindrical, thin***, about 0.5mm wide, and ***forked***

Occurrences Albany W Australia to Victoria

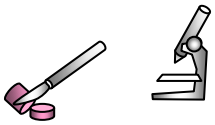
Usual Habitat specifically on the sea grass, *Amphibolis* from shallow, rough water, to 20m deep

Similar Species *Dicranema cincinnalis* which also grows in clumps on *Amphibolis* but is smaller

Description in the Benthic Flora Part IIIA, pages 461, 464-465

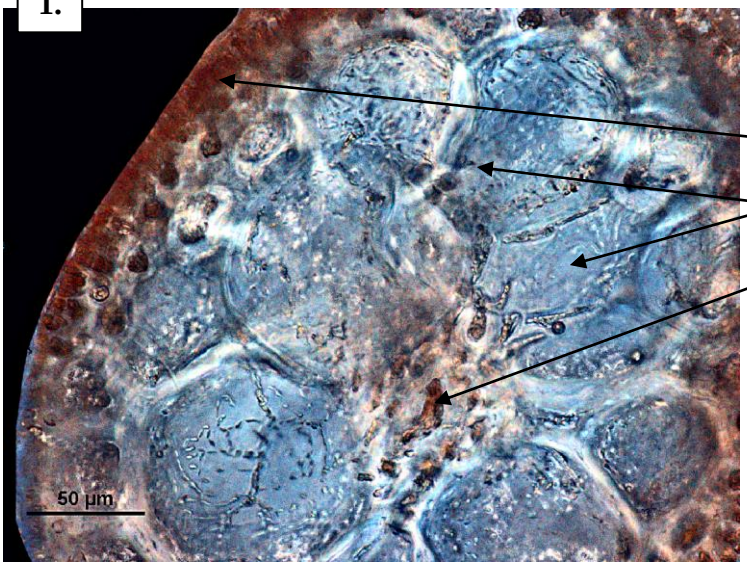
Special Requirements

1. cut a cross section of a branch and view microscopically to find:
   - the innermost parts of cores (inner medulla) of slender ***threads***
   - rings of ***several, large*** cells in the outer parts of cores
   - outermost (cortex) layers of very ***small*** cells in 2-3 rows, facing outwards, ***not*** forming rings in surface view
3. find female structures (cystocarps), forming swellings near the ***tips*** of shorter branches that end in a ***spine***. Cut a cross section to view:
   - central ***clusters*** of spores
   - practically no envelopes of threads and ***no*** openings (ostioles)
4. if possible, find sporangial plants with ***scattered***, cigar-shaped tetrasporangia divided across into four sporangia (***zonate***) (not illustrated below)



Details of Anatomy

1.



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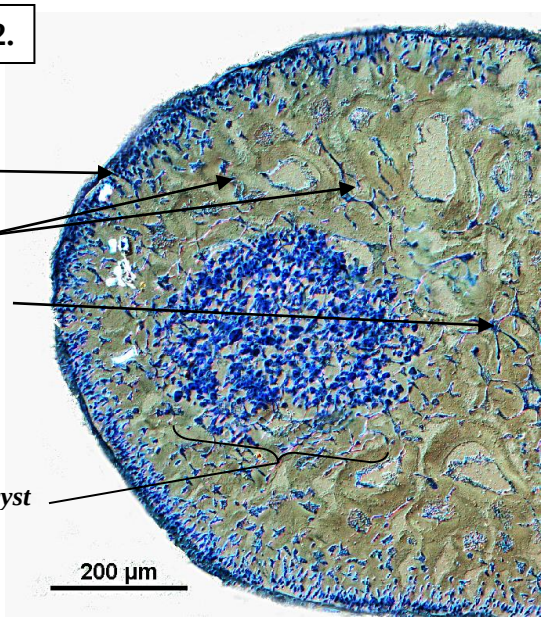
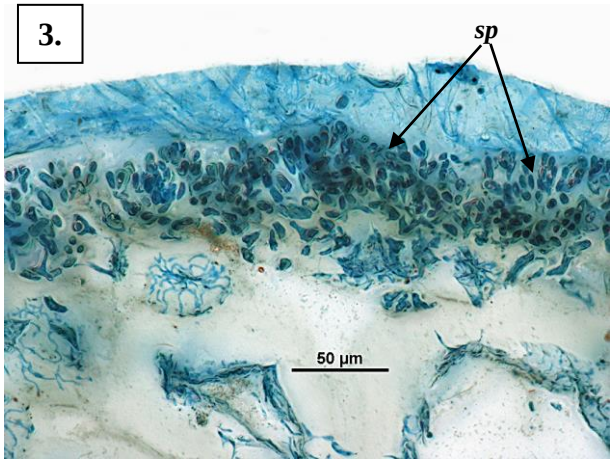


3.

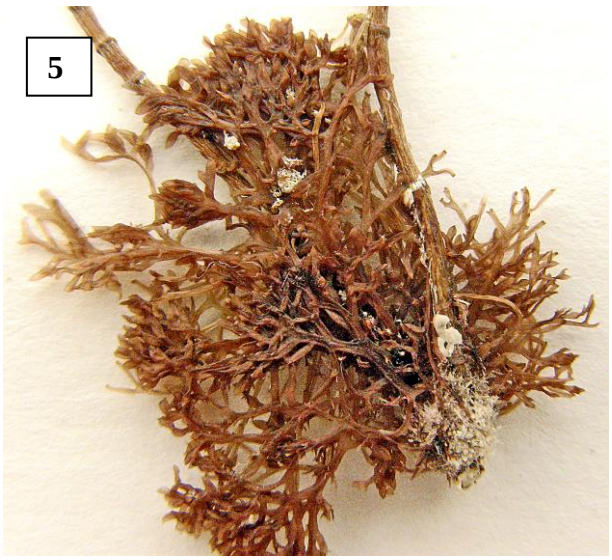


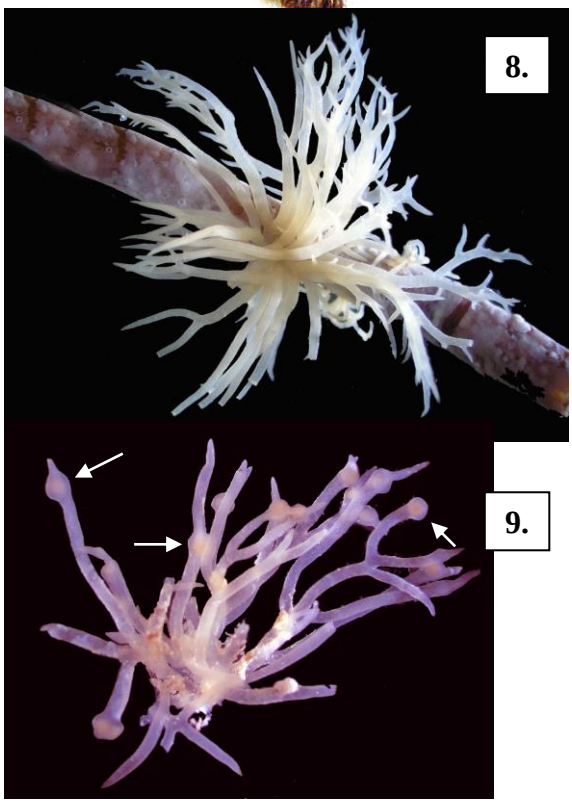
Cross sections of *Mychodea pusilla* showing the mass of threads in the inner core (medullary filaments, *med fil*), outer core (*o med*) of large cells and outermost layer of small cells in branches facing outwards (cortex, *co*)

1. handcut (thick, unstained) cross section (A38290)
2. embedded cystocarp (*cyst*), stained blue (A44705 slide 3720)
3. part of the cortex showing spermatangial branches (*sp*) (A44705 slide 3720)

* Descriptive names are inventions to aid identification, and are not commonly used

"Algae revealed", R N Baldock, State Herbarium S Australia, December 2008; corrected April 2014





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4, 5. two magnifications of plants (A68423) on the stem of an *Amphibolis*, in shallow water, Dolphin Beach, Innes National Park, S Yorke Peninsula S Australia

6, 7. female plants (A69570) from 20m deep on *Amphibolis*, Isles of St Francis S Australia, with cystocarpic swellings (arrowed) causing bending of the thin, cylindrical branches

8, 9. preserved (bleached) specimens (A38290) on *Amphibolis* stems from Tiparra reef, S Australia, magnified to show branching pattern and cystocarpic swellings (arrowed) ending in a spine

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